

Abstract of the Disclosure

A terrestrially deployed flexible antenna is disclosed. The antenna includes a planar, flexible dielectric material having a first side and a second side. A flexible conductive ground plane is secured to the first side of the dielectric material. At least one flexible, planar conductive element is secured to the second side of the flexible dielectric material. The flexible dielectric material is bonded to form a collapsible enclosed volume with the ground plane forming an inner surface of the enclosed volume. A propellant is disposed within the enclosed volume. The propellant releases a predetermined volume of gas when ignited. An igniter ignites the propellant to release the predetermined volume of gas, to thereby temporarily expand the enclosed volume to a predetermined shape such that the ground plane, the dielectric material, and the at least one conductive element cooperate to form a resonant antenna circuit.